

Adv DevOps Exp 09

Aim: To Understand Continuous monitoring and Installation and configuration of Nagios Core, Nagios Plugins and NRPE (Nagios Remote Plugin Executor) on Linux Machine.

Theory:**What is Nagios?**

Nagios is an open-source software for continuous monitoring of systems, networks, and infrastructures. It runs plugins stored on a server that is connected with a host or another server on your network or the Internet. In case of any failure, Nagios alerts about the issues so that the technical team can perform the recovery process immediately.

Nagios is used for continuous monitoring of systems, applications, service and business processes in a DevOps culture.

Why We Need Nagios tool?

Here are the important reasons to use Nagios monitoring tool:

- Detects all types of network or server issues
- Helps you to find the root cause of the problem which allows you to get the permanent solution to the problem
- Active monitoring of your entire infrastructure and business processes
- Allows you to monitor and troubleshoot server performance issues
- Helps you to plan for infrastructure upgrades before outdated systems create failures
- You can maintain the security and availability of the service
- Automatically fix problems in a panic situation

Features of Nagios

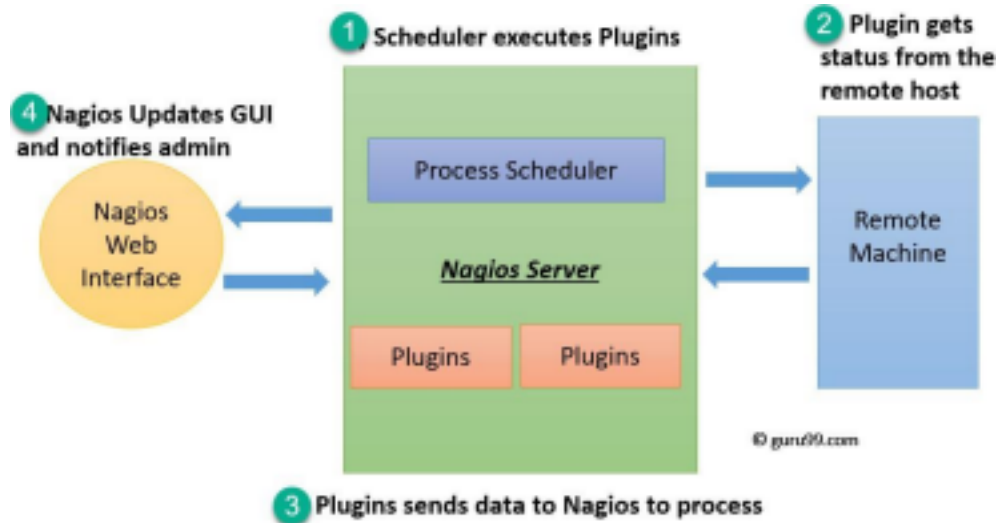
Following are the important features of Nagios monitoring tool:

- Relatively scalable, Manageable, and Secure
- Good log and database system
- Informative and attractive web interfaces
- Automatically send alerts if condition changes
- If the services are running fine, then there is no need to do check that host is an alive
- Helps you to detect network errors or server crashes
- You can troubleshoot the performance issues of the server.
- The issues, if any, can be fixed automatically as they are identified during the monitoring process
- You can monitor the entire business process and IT infrastructure with a single pass
- The product's architecture is easy to write new plugins in the language of your choice
- Nagios allows you to read its configuration from an entire directory which helps you to decide how to define individual files
- Utilizes topology to determine dependencies
- Monitor network services like HTTP, SMTP, HTTP, SNMP, FTP, SSH, POP, etc.
- Helps you to define network host hierarchy using parent hosts
- Ability to define event handlers that runs during service or host events for proactive

- problem resolution
- Support for implementing redundant monitoring hosts

Nagios Architecture

Nagios is a client-server architecture. Usually, on a network, a Nagios server is running on a host, and plugins are running on all the remote hosts which should be monitored.



1. The scheduler is a component of the server part of Nagios. It sends a signal to execute the plugins at the remote host.
2. The plugin gets the status from the remote host
3. The plugin sends the data to the process scheduler
4. The process scheduler updates the GUI and notifications are sent to admins.

Step 1: Create a security group with the required configurations

I have created a new security group with a name 'newsecurity'

[EC2](#) > [Security Groups](#) > Create security group

Create security group [Info](#)

A security group acts as a virtual firewall for your instance to control inbound and outbound traffic. To create a new

Basic details

Security group name [Info](#)

Name cannot be edited after creation.

Description [Info](#)

VPC [Info](#)

I have modified the INBOUND RULES as follows

Type	Protocol	Port range	Source	Description - optional	
HTTP	TCP	80	Anywh... ::/0 X		Delete
HTTPS	TCP	443	Anywh... 0.0.0.0/0 X		Delete
SSH	TCP	22	Anywh... 0.0.0.0/0 X		Delete
All ICMP - IPv6	IPv6 ICMP	All	Anywh... ::/0 X		Delete
All ICMP - IPv4	ICMP	All	Anywh... 0.0.0.0/0 X		Delete
All traffic	All	All	Anywh... 0.0.0.0/0 X		Delete
Custom TCP	TCP	5666	Anywh... 0.0.0.0/0 X		Delete

Step 2: Create ec2 instance

Name it as nagios-host. Select instance type as amazon-linux and choose the already created key pair and security group

Name and tags [Info](#)

Name
 [Add additional tags](#)

▼ **Application and OS Images (Amazon Machine Image)** [Info](#)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

Recents | **Quick Start**

 Amazon Linux aws	 macOS Mac	 Ubuntu ubuntu	 Windows Microsoft	 Red Hat Red Hat	 SUSE Linux SUSE
-------------------------	------------------	----------------------	--------------------------	------------------------	------------------------

[Browse more AMIs](#)
Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

▼ **Key pair (login)** [Info](#)

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - *required*
 [Create new key pair](#)

Firewall (security groups) [Info](#)

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

☐ Create security group ☒ Select existing security group

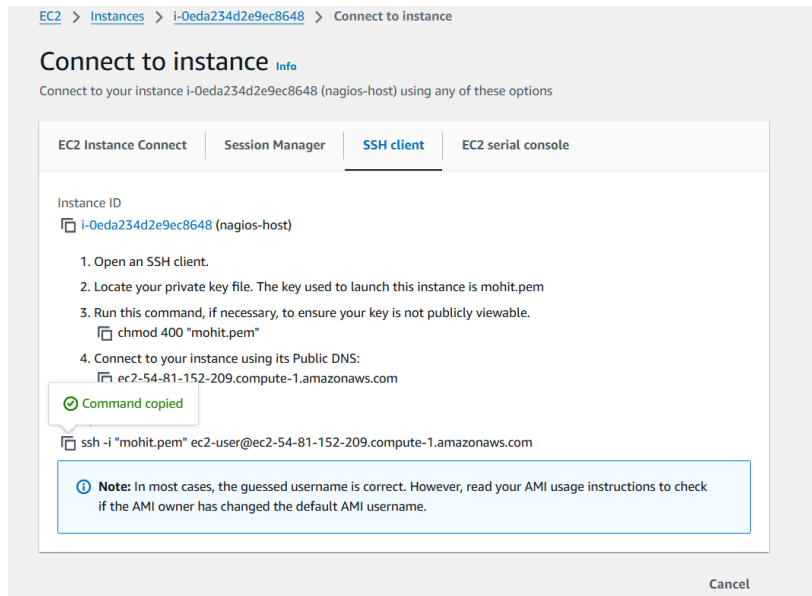
Common security groups [Info](#)

VPC: vpc-0aa3db8937df8678b

[Compare security group rules](#)

Security groups that you add or remove here will be added to or removed from all your network interfaces.

Copy the given ssh command, as we will require it for logging into our nagios-host instance from our windows powershell



Step 3: Open an administrative powershell and remotely login using the above mentioned ssh command

```
ec2-user@ip-172-31-92-249:~  
Windows PowerShell  
Copyright (C) Microsoft Corporation. All rights reserved.  
  
Try the new cross-platform PowerShell https://aka.ms/powershell  
  
PS C:\WINDOWS\system32> cd C:\Users\Dell\Downloads  
PS C:\Users\Dell\Downloads> ssh -i "mohit.pem" ec2-user@ec2-54-81-152-209.compute-1.amazonaws.com  
  
#  
##### Amazon Linux 2023  
~~~~ \ ##### |  
~~~~ \|###|  
~~~~ \|#/ _>  
~~~~ V ~' '->  
~~~~  
_+_*_  
_/_/\_/_/  
_/m/'_-/_
```

Last login: Mon Sep 30 09:25:13 2024 from 125.99.93.18

```
#  
##### Amazon Linux 2023  
~~~~ \ ##### |  
~~~~ \|###|  
~~~~ \|#/ _>  
~~~~ V ~' '->  
~~~~  
_+_*_  
_/_/\_/_/  
_/m/'_-/_
```

Last login: Mon Sep 30 09:25:13 2024 from 125.99.93.18

```
[ec2-user@ip-172-31-92-249 ~]$ sudo yum update  
Last metadata expiration check: 0:13:13 ago on Mon Sep 30 09:23:03 2024.  
Dependencies resolved.  
Nothing to do.  
Complete!  
[ec2-user@ip-172-31-92-249 ~]$ sudo yum install httpd php  
Last metadata expiration check: 0:13:23 ago on Mon Sep 30 09:23:03 2024.  
Package httpd-2.4.62-1.amzn2023.x86_64 is already installed.  
Package php8.3-8.3.10-1.amzn2023.0.1.x86_64 is already installed.  
Dependencies resolved.  
Nothing to do.  
Complete!
```

And then run these commands

sudo yum update

sudo yum install httpd php

```
ec2-user@ip-172-31-41-160:~$ sudo yum update
Last metadata expiration check: 0:01:37 ago on Wed Oct  2 12:28:33 2024.
Dependencies resolved.
Nothing to do.
complete!
ec2-user@ip-172-31-41-160:~$ sudo yum install httpd php
Last metadata expiration check: 0:01:45 ago on Wed Oct  2 12:28:33 2024.
Dependencies resolved.

=====
Package                                Architecture           Version                Repository              Size
=====
Installing:
httpd                                  x86_64                 2.4.62-1.amzn2023      amazonlinux              48 k
php8.3                                x86_64                 8.3.10-1.amzn2023.0.1  amazonlinux              10 k
Installing dependencies:
apr                                    x86_64                 1.7.2-2.amzn2023.0.2   amazonlinux              129 k
apr-util                              x86_64                 1.6.3-1.amzn2023.0.1   amazonlinux              98 k
generic-logos-httpd                  noarch                 18.0-0-12.amzn2023.0.3 amazonlinux              19 k
httpd-core                           x86_64                 2.4.62-1.amzn2023      amazonlinux              1.4 M
httpd-filesystem                     noarch                 2.4.62-1.amzn2023      amazonlinux              14 k
httpd-tools                          x86_64                 2.4.62-1.amzn2023      amazonlinux              81 k
libmodssl                            x86_64                 1.0.9-4.amzn2023.0.2   amazonlinux              315 k
libtool                              x86_64                 1.0-10-4.amzn2023      amazonlinux              170 k
libxml2                              x86_64                 1.1.34-5.amzn2023.0.2  amazonlinux              241 k
mailcap                              noarch                 2.1.49-3.amzn2023.0.3  amazonlinux              33 k
nginx-filesystem                     x86_64                 1.1.24-0-1.amzn2023.0.4 amazonlinux              9.8 k
php8.3-cli                           x86_64                 8.3.10-1.amzn2023.0.1  amazonlinux              3.7 M
php8.3-common                        x86_64                 8.3.10-1.amzn2023.0.1  amazonlinux              737 k
php8.3-process                       x86_64                 8.3.10-1.amzn2023.0.1  amazonlinux              45 k
php8.3-xml                           x86_64                 8.3.10-1.amzn2023.0.1  amazonlinux              154 k
Installing weak dependencies:
apr-util-openssl                     x86_64                 1.6.3-1.amzn2023.0.1   amazonlinux              17 k
mod_http2                            x86_64                 2.0.27-1.amzn2023.0.3  amazonlinux              166 k
mod_lua                              x86_64                 2.4.62-1.amzn2023      amazonlinux              61 k
php8.3-fpm                           x86_64                 8.3.10-1.amzn2023.0.1  amazonlinux              1.9 M
php8.3-mbstring                      x86_64                 8.3.10-1.amzn2023.0.1  amazonlinux              526 k
php8.3-opcache                       x86_64                 8.3.10-1.amzn2023.0.1  amazonlinux              370 k
php8.3-pdo                           x86_64                 8.3.10-1.amzn2023.0.1  amazonlinux              89 k
php8.3-sodium                        x86_64                 8.3.10-1.amzn2023.0.1  amazonlinux              41 k

Transaction Summary
-----
Install 25 Packages
```

sudo yum install gcc glibc glibc-common

```
ec2-user@ip-172-31-41-160:~$ sudo yum install gcc glibc glibc-common
Last metadata expiration check: 0:02:02 ago on Wed Oct  2 12:28:33 2024.
Package glibc-2.34-52.amzn2023.0.11.x86_64 is already installed.
Package glibc-common-2.34-52.amzn2023.0.11.x86_64 is already installed.
Dependencies resolved.

=====
Package                                Architecture           Version                Repository              Size
=====
Installing:
gcc                                    x86_64                 11.4.1-2.amzn2023.0.2   amazonlinux              32 M
Installing dependencies:
annobin-docs                         noarch                 10.93-1.amzn2023.0.1     amazonlinux              92 k
annobin-plugin-gcc                   x86_64                 10.93-1.amzn2023.0.1     amazonlinux              887 k
cpp                                  x86_64                 11.4.1-2.amzn2023.0.2   amazonlinux              10 M
gc                                    x86_64                 8.0.4-5.amzn2023.0.2     amazonlinux              105 k
glibc-devel                           x86_64                 2.34-52.amzn2023.0.11    amazonlinux              27 k
glibc-headers-x86                    noarch                 2.34-52.amzn2023.0.11    amazonlinux              427 k
guile22                              x86_64                 2.2-7-2.amzn2023.0.3     amazonlinux              6.4 M
kernel-headers                       x86_64                 6.1.109-118.189.amzn2023.x86_64.rpm  1.4 M
libmpc                               x86_64                 1.2.1-2.amzn2023.0.2     amazonlinux              62 k
libtool-ltdl                         x86_64                 2.4.7-1.amzn2023.0.3     amazonlinux              38 k
libxcrypt-devel                      x86_64                 4.4.33-7.amzn2023        amazonlinux              32 k
make                                  x86_64                 1:4.3-5.amzn2023.0.2     amazonlinux              534 k

Transaction Summary
-----
Install 13 Packages

Total download size: 52 M
Installed size: 168 M
Is this ok [y/N]: y
Downloading Packages:
(1/13): annobin-docs-10.93-1.amzn2023.0.1.noarch.rpm                                852 kB/s | 92 kB  00:00
(2/13): annobin-plugin-gcc-10.93-1.amzn2023.0.1.x86_64.rpm                          6.5 MB/s | 887 kB 00:00
(3/13): gc-8.0.4-5.amzn2023.0.2.x86_64.rpm                                           2.3 MB/s | 105 kB 00:00
(4/13): glibc-devel-2.34-52.amzn2023.0.11.x86_64.rpm                               1.1 MB/s | 27 kB  00:00
(5/13): cpp-11.4.1-2.amzn2023.0.2.x86_64.rpm                                         32 MB/s | 10 MB  00:00
(6/13): glibc-headers-x86-2.34-52.amzn2023.0.11.noarch.rpm                           2.9 MB/s | 427 kB 00:00
(7/13): kernel-headers-6.1.109-118.189.amzn2023.x86_64.rpm                          16 MB/s | 1.4 MB  00:00
(8/13): libmpc-1.2.1-2.amzn2023.0.2.x86_64.rpm                                       2.1 MB/s | 62 kB  00:00
(9/13): guile22-2.2.7-2.amzn2023.0.3.x86_64.rpm                                      27 MB/s | 6.4 MB  00:00
(10/13): libtool-ltdl-2.4.7-1.amzn2023.0.3.x86_64.rpm                               322 kB/s | 38 kB  00:00
(11/13): libxcrypt-devel-4.4.33-7.amzn2023.x86_64.rpm                               1.4 MB/s | 32 kB  00:00
```

sudo yum install gd gd-devel

```

ec2-user@ip-172-31-41-160:~$ sudo yum install gd gd-devel
Last metadata expiration check: 0:02:25 ago on Wed Oct  2 12:28:33 2024.
Dependencies resolved.
=====
Package                               Architecture      Version            Repository          Size
-----
Installing:
gd                                     x86_64            2.3.3-5.amzn2023.0.3  amazonlinux        139 k
gd-devel                             x86_64            2.3.3-5.amzn2023.0.3  amazonlinux         38 k
Installing dependencies:
brotli                               x86_64            1.0.9-4.amzn2023.0.2  amazonlinux         314 k
brotli-devel                         x86_64            1.0.9-4.amzn2023.0.2  amazonlinux          31 k
bzip2-devel                         x86_64            1.0.8-6.amzn2023.0.2  amazonlinux          214 k
cairo                                x86_64            1.17.8-2.amzn2023.0.1  amazonlinux          604 k
cmake-filesystem                    x86_64            3.22.2-1.amzn2023.0.4  amazonlinux           16 k
fontconfig                          x86_64            2.13.04-2.amzn2023.0.2  amazonlinux          273 k
fontconfig-devel                   x86_64            2.13.04-2.amzn2023.0.2  amazonlinux          128 k
fontconfig-devel                    noarch            1:2.0.5-12.amzn2023.0.2  amazonlinux           9.5 k
freetype                           x86_64            2.13.2-5.amzn2023.0.1  amazonlinux          423 k
freetype-devel                     x86_64            2.13.2-5.amzn2023.0.1  amazonlinux          912 k
glib2-devel                         x86_64            2.74.7-689.amzn2023.0.2  amazonlinux          486 k
google-noto-fonts-common            noarch            20201206-2.amzn2023.0.2  amazonlinux           15 k
google-noto-sans-vf-fonts           noarch            20201206-2.amzn2023.0.2  amazonlinux          492 k
graphite2                           x86_64            1.3.14-7.amzn2023.0.2  amazonlinux           97 k
graphite2-devel                    x86_64            1.3.14-7.amzn2023.0.2  amazonlinux           21 k
harfbuzz                           x86_64            7.0.0-2.amzn2023.0.1  amazonlinux          868 k
harfbuzz-devel                     x86_64            7.0.0-2.amzn2023.0.1  amazonlinux          484 k
harfbuzz-icu                       x86_64            7.0.0-2.amzn2023.0.1  amazonlinux           18 k
libgk11-libs                       x86_64            2.1-21.amzn2023.0.2  amazonlinux           54 k
langpacks-core-font-en             noarch            3.0-21.amzn2023.0.4  amazonlinux           10 k
libICE                             x86_64            1.0.10-6.amzn2023.0.2  amazonlinux           71 k
libSM                              x86_64            1.2.3-8.amzn2023.0.2  amazonlinux           42 k
libX11                             x86_64            1.7.2-3.amzn2023.0.4  amazonlinux          657 k
libX11-common                      noarch            1.7.2-3.amzn2023.0.4  amazonlinux          152 k
libX11-devel                       x86_64            1.7.2-3.amzn2023.0.4  amazonlinux          939 k
libX11-xcb                         x86_64            1.7.2-3.amzn2023.0.4  amazonlinux           12 k
libXau                             x86_64            1.0.9-6.amzn2023.0.2  amazonlinux           31 k
libXau-devel                       x86_64            1.0.9-6.amzn2023.0.2  amazonlinux           14 k
libXext                           x86_64            1.3.4-6.amzn2023.0.2  amazonlinux           41 k
libXpm                             x86_64            3.5.15-2.amzn2023.0.3  amazonlinux           65 k
libXpm-devel                       x86_64            3.5.15-2.amzn2023.0.3  amazonlinux           59 k
libXrender                         x86_64            0.9.10-14.amzn2023.0.2  amazonlinux           28 k
libxt                              x86_64            1.2.0-4.amzn2023.0.2  amazonlinux          181 k
libXt-devel                        x86_64            1.2.0-4.amzn2023.0.2  amazonlinux           15 k

```

Create a new Nagios User with its password. You'll have to enter the password twice for confirmation.

sudo adduser -m nagios

sudo passwd nagios

```

[ec2-user@ip-172-31-41-160 ~]$ sudo adduser -m nagios
[ec2-user@ip-172-31-41-160 ~]$ sudo passwd nagios
Changing password for user nagios.
New password:
Retype new password:
passwd: all authentication tokens updated successfully.
[ec2-user@ip-172-31-41-160 ~]$

```

Create a new user group & create a new directory for Nagios downloads using the following commands

sudo groupadd nagcmd

sudo usermod -a -G nagcmd nagios

sudo usermod -a -G nagcmd apache

mkdir ~/downloads

cd ~/downloads

Use **wget** to download the source zip files.

In this step, we are downloading, the latest version of nagios and the necessary plugins required to carry out the tasks of setting up a nagios server

wget <https://sourceforge.net/projects/nagios/files/latest/download>

```
ec2-user@ip-172-31-41-160:~/downloads/nagios-4.5.5
[ec2-user@ip-172-31-41-160 downloads]$ wget https://sourceforge.net/projects/nagios/files/latest/download
--2024-10-02 12:34:21-- https://sourceforge.net/projects/nagios/files/latest/download
Resolving sourceforge.net (sourceforge.net)... 172.64.150.145, 104.18.37.111, 2066:4700:4400::6812:256f, ...
Connecting to sourceforge.net (sourceforge.net)[172.64.150.145]:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://downloads.sourceforge.net/project/nagios/nagios-4.x/nagios-4.5.5/nagios-4.5.5.tar.gz?ts=gAAAAABm_T3MNSZPzP-6la2TltvoGCG7vV7QGVH08n3tC24QehfMw7vHcokBGHg2iIRxbmfugII0LccNfXa0ixg3jZkG3w3D3D&use_mirror=phoenixnap&= [following]
--2024-10-02 12:34:21-- https://downloads.sourceforge.net/project/nagios/nagios-4.x/nagios-4.5.5/nagios-4.5.5.tar.gz?ts=gAAAAABm_T3MNSZPzP-6la2TltvoGCG7vV7QGVH08n3tC24QehfMw7vHcokBGHg2iIRxbmfugII0LccNfXa0ixg3jZkG3w3D3D&use_mirror=phoenixnap&= [following]
Resolving downloads.sourceforge.net (downloads.sourceforge.net)... 204.68.111.105
Connecting to downloads.sourceforge.net (downloads.sourceforge.net)[204.68.111.105]:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://phoenixnap.dl.sourceforge.net/project/nagios/nagios-4.x/nagios-4.5.5/nagios-4.5.5.tar.gz?viasf=1 [following]
--2024-10-02 12:34:21-- https://phoenixnap.dl.sourceforge.net/project/nagios/nagios-4.x/nagios-4.5.5/nagios-4.5.5.tar.gz?viasf=1
Resolving phoenixnap.dl.sourceforge.net (phoenixnap.dl.sourceforge.net)... 184.164.141.26
Connecting to phoenixnap.dl.sourceforge.net (phoenixnap.dl.sourceforge.net)[184.164.141.26]:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 2065473 (2.0M) [application/x-gzip]
Saving to: 'download'

download                               100%[=====>] 1.97M 4.23MB/s in 0.5s

2024-10-02 12:34:22 (4.23 MB/s) - 'download' saved [2065473/2065473]
```

wget <https://nagios-plugins.org/download/nagios-plugins-2.4.11.tar.gz>

```
ec2-user@ip-172-31-41-160:~/downloads/nagios-4.5.5
[ec2-user@ip-172-31-41-160 downloads]$ wget https://nagios-plugins.org/download/nagios-plugins-2.4.11.tar.gz
--2024-10-02 12:34:46-- https://nagios-plugins.org/download/nagios-plugins-2.4.11.tar.gz
Resolving nagios-plugins.org (nagios-plugins.org)... 45.56.123.251
Connecting to nagios-plugins.org (nagios-plugins.org)[45.56.123.251]:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 2753049 (2.6M) [application/x-gzip]
Saving to: 'nagios-plugins-2.4.11.tar.gz'

nagios-plugins-2.4.11.tar.gz           100%[=====>] 2.62M 7.48MB/s in 0.4s

2024-10-02 12:34:46 (7.48 MB/s) - 'nagios-plugins-2.4.11.tar.gz' saved [2753049/2753049]
```

```
ec2-user@ip-172-31-92-249:~/downloads
[ec2-user@ip-172-31-92-249 ~]$ cd ~/downloads
[ec2-user@ip-172-31-92-249 downloads]$ wget https://sourceforge.net/projects/nagios/files/latest/download
--2024-09-30 09:54:56-- https://sourceforge.net/projects/nagios/files/latest/download
Resolving sourceforge.net (sourceforge.net)... 172.64.150.145, 104.18.37.111, 2066:4700:4400::6812:256f, ...
Connecting to sourceforge.net (sourceforge.net)[172.64.150.145]:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://downloads.sourceforge.net/project/nagios/nagios-4.x/nagios-4.5.5/nagios-4.5.5.tar.gz?ts=gAAAAABm-nVw9RDvAvnMaShLF3gu4RXTSVxrTZ6F6xJVhVAOzp81bPgbyzLMcDDAALgtEC1P0Kr0cgJN23bWktariCjQTVrk3D3D&use_mirror=netactuate&= [following]
--2024-09-30 09:54:56-- https://downloads.sourceforge.net/project/nagios/nagios-4.x/nagios-4.5.5/nagios-4.5.5.tar.gz?ts=gAAAAABm-nVw9RDvAvnMaShLF3gu4RXTSVxrTZ6F6xJVhVAOzp81bPgbyzLMcDDAALgtEC1P0Kr0cgJN23bWktariCjQTVrk3D3D&use_mirror=netactuate&= [following]
Resolving downloads.sourceforge.net (downloads.sourceforge.net)... 204.68.111.105
Connecting to downloads.sourceforge.net (downloads.sourceforge.net)[204.68.111.105]:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://netactuate.dl.sourceforge.net/project/nagios/nagios-4.x/nagios-4.5.5/nagios-4.5.5.tar.gz?viasf=1 [following]
--2024-09-30 09:54:57-- https://netactuate.dl.sourceforge.net/project/nagios/nagios-4.x/nagios-4.5.5/nagios-4.5.5.tar.gz?viasf=1
Resolving netactuate.dl.sourceforge.net (netactuate.dl.sourceforge.net)... 104.225.3.66
Connecting to netactuate.dl.sourceforge.net (netactuate.dl.sourceforge.net)[104.225.3.66]:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 2065473 (2.0M) [application/x-gzip]
Saving to: 'download'

download                               100%[=====>] 1.97M ---KB/s in 0.07s

2024-09-30 09:54:57 (29.8 MB/s) - 'download' saved [2065473/2065473]

[ec2-user@ip-172-31-92-249 downloads]$ wget https://nagios-plugins.org/download/nagios-plugins-2.4.9.tar.gz
--2024-09-30 09:56:53-- https://nagios-plugins.org/download/nagios-plugins-2.4.9.tar.gz
Resolving nagios-plugins.org (nagios-plugins.org)... 45.56.123.251
Connecting to nagios-plugins.org (nagios-plugins.org)[45.56.123.251]:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 2754403 (2.6M) [application/x-gzip]
Saving to: 'nagios-plugins-2.4.9.tar.gz'

nagios-plugins-2.4.9.tar.gz           100%[=====>] 2.63M 7.54MB/s in 0.3s

2024-09-30 09:56:54 (7.54 MB/s) - 'nagios-plugins-2.4.9.tar.gz' saved [2754403/2754403]
```

Now, we run the next command in the following manner

tar xzvf <nagios-4.5.5 version> (for me it has gotten saved as 'download')

So i wrote **tar xzvf download**


```
ec2-user@ip-172-31-41-160:~/downloads
[ec2-user@ip-172-31-41-160 downloads]$ tar zxvf download
nagios-4.5.5/
nagios-4.5.5/.github/
nagios-4.5.5/.github/workflows/
nagios-4.5.5/.github/workflows/test.yml
nagios-4.5.5/.gitignore
nagios-4.5.5/CONTRIBUTING.md
nagios-4.5.5/ChangeLog
nagios-4.5.5/INSTALLING
nagios-4.5.5/LLEGAL
nagios-4.5.5/LICENSE
nagios-4.5.5/Makefile.in
nagios-4.5.5/README.md
nagios-4.5.5/THANKS
nagios-4.5.5/UPGRADING
nagios-4.5.5/aclocal.m4
nagios-4.5.5/autoconf-macros/
nagios-4.5.5/autoconf-macros/.gitignore
nagios-4.5.5/autoconf-macros/CHANGELOG.md
nagios-4.5.5/autoconf-macros/LICENSE
nagios-4.5.5/autoconf-macros/LICENSE.md
nagios-4.5.5/autoconf-macros/README.md
nagios-4.5.5/autoconf-macros/add_group_user
nagios-4.5.5/autoconf-macros/ax_nagios_get_distrib
nagios-4.5.5/autoconf-macros/ax_nagios_get_files
nagios-4.5.5/autoconf-macros/ax_nagios_get_inetd
nagios-4.5.5/autoconf-macros/ax_nagios_get_init
nagios-4.5.5/autoconf-macros/ax_nagios_get_os
nagios-4.5.5/autoconf-macros/ax_nagios_get_paths
nagios-4.5.5/autoconf-macros/ax_nagios_get_ssl
nagios-4.5.5/base/
nagios-4.5.5/base/.gitignore
nagios-4.5.5/base/Makefile.in
nagios-4.5.5/base/broker.c
nagios-4.5.5/base/checks.c
nagios-4.5.5/base/commands.c
nagios-4.5.5/base/config.c
nagios-4.5.5/base/events.c
nagios-4.5.5/base/flapping.c
nagios-4.5.5/base/logging.c
nagios-4.5.5/base/nagios.c
nagios-4.5.5/base/nagiosstats.c
nagios-4.5.5/base/nebmods.c
nagios-4.5.5/base/nerd.c
```

After which we are supposed to **change our directory** over there

For eg. **cd nagios-4.5.5...** depending on the version that we have downloaded

Next, Run this command (make sure that you are working inside nagios-4.x.x directory)

./configure --with-command-group=nagcmd

```
ec2-user@ip-172-31-41-160:~/downloads/nagios-4.5.5
[ec2-user@ip-172-31-41-160 downloads]$ cd nagios-4.5.5
[ec2-user@ip-172-31-41-160 nagios-4.5.5]$ ./configure --with-command-group=nagcmd
checking for a BSD-compatible install... /usr/bin/install -c
checking build system type... x86_64-pc-linux-gnu
checking host system type... x86_64-pc-linux-gnu
checking for gcc... gcc
checking whether the C compiler works... yes
checking for C compiler default output file name... a.out
checking for suffix of executables...
checking whether we are cross compiling... no
checking for suffix of object files... o
checking whether the compiler supports GNU C... yes
checking whether gcc accepts -g... yes
checking for gcc option to enable C11 features... none needed
checking whether make sets $(MAKE)... yes
checking whether ln -s works... yes
checking for strip... /usr/bin/strip
checking for sys/wait.h that is POSIX.1 compatible... yes
checking for stdio.h... yes
checking for stdlib.h... yes
checking for string.h... yes
checking for inttypes.h... yes
checking for stdint.h... yes
checking for strings.h... yes
checking for sys/stat.h... yes
checking for sys/types.h... yes
checking forunistd.h... yes
checking forarpa/inet.h... yes
checking for ctype.h... yes
checking for dirent.h... yes
checking for errno.h... yes
checking forfcntl.h... yes
checking for getopt.h... yes
checking forgrp.h... yes
checking forlibgen.h... yes
checking forlimits.h... yes
checking formath.h... yes
checking fornetdb.h... yes
checking fornetinet/in.h... yes
checking forpwd.h... yes
checking forregex.h... yes
checking forsignal.h... yes
checking forsocket.h... no
checking forstdarg.h... yes
```

```

checking for strcasecmp... yes
checking for strtoul... yes
checking for unsetenv... yes
checking for type of socket size... size_t
checking for Kerberos include files... configure: WARNING: could not find include files
checking for pkg-config... pkg-config
checking for SSL headers... configure: error: Cannot find ssl headers
[ec2-user@ip-172-31-41-160 nagios-4.5.5]$

```

After running this command, we get an **error related to ssl header being absent**

For that purpose, we are to run the following command.

sudo yum install openssl-devel (for ssl header)

```

[ec2-user@ip-172-31-41-160 nagios-4.5.5]$ sudo yum install openssl-devel
Last metadata expiration check: 0:12:11 ago on Wed Oct  2 12:28:33 2024.
Dependencies resolved.
=====
Package                               Architecture      Version           Size              Repository
-----
Installing:
openssl-devel                         x86_64            1:3.0.8-1.amzn2023.0.14  3.0 M             amazonlinux
Transaction Summary
-----
Install 1 Package

Total download size: 3.0 M
Installed size: 4.7 M
Is this ok [y/N]: y
Downloading Packages:
openssl-devel-3.0.8-1.amzn2023.0.14.x86_64.rpm                                26 MB/s | 3.0 MB  00:00
-----
Total                                                                    17 MB/s | 3.0 MB  00:00
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing      :
  Installing     : openssl-devel-1:3.0.8-1.amzn2023.0.14.x86_64 1/1
  Running scriptlet: openssl-devel-1:3.0.8-1.amzn2023.0.14.x86_64 1/1
  Verifying      : openssl-devel-1:3.0.8-1.amzn2023.0.14.x86_64 1/1
Installed:
openssl-devel-1:3.0.8-1.amzn2023.0.14.x86_64
Complete!
[ec2-user@ip-172-31-41-160 nagios-4.5.5]$

```

Now, Re-run **./configure --with-command-group=nagcmd**

After this, run **make all** command

```

ec2-user@ip-172-31-41-160:~/downloads/nagios-4.5.5
[ec2-user@ip-172-31-41-160 nagios-4.5.5]$ make all
cd ./base && make
make[1]: Entering directory '/home/ec2-user/downloads/nagios-4.5.5/base'
gcc -Wall -I. -I. -I./lib -I./include -I./include -I. -g -O2 -DHAVE_CONFIG_H -DMSCORE -c -o nagios.o ./nagios.c
gcc -Wall -I. -I. -I./lib -I./include -I./include -I. -g -O2 -DHAVE_CONFIG_H -DMSCORE -c -o broker.o broker.c
gcc -Wall -I. -I. -I./lib -I./include -I./include -I. -g -O2 -DHAVE_CONFIG_H -DMSCORE -c -o netmods.o netmods.c
gcc -Wall -I. -I. -I./lib -I./include -I./include -I. -g -O2 -DHAVE_CONFIG_H -DMSCORE -c -o ../common/shared.o ../common/shared.c
gcc -Wall -I. -I. -I./lib -I./include -I./include -I. -g -O2 -DHAVE_CONFIG_H -DMSCORE -c -o query-handler.o query-handler.c
gcc -Wall -I. -I. -I./lib -I./include -I./include -I. -g -O2 -DHAVE_CONFIG_H -DMSCORE -c -o workers.o workers.c
In function 'get_worker_list',
    inlined from 'get_workers' at workers.c:277:12:
workers.c:253:17: warning: '%s' directive argument is null [-Wformat-overflow]
   253 |         log_debug_info(DEBBUG_CHECKS, 1, "Found specialized worker(s) for '%s'", (slash && *slash != '/') ? slash : cmd_name);
       |         ~~~~~^~~~~~
gcc -Wall -I. -I. -I./lib -I./include -I./include -I. -g -O2 -DHAVE_CONFIG_H -DMSCORE -c -o checks.o checks.c
gcc -Wall -I. -I. -I./lib -I./include -I./include -I. -g -O2 -DHAVE_CONFIG_H -DMSCORE -c -o config.o config.c
gcc -Wall -I. -I. -I./lib -I./include -I./include -I. -g -O2 -DHAVE_CONFIG_H -DMSCORE -c -o commands.o commands.c
gcc -Wall -I. -I. -I./lib -I./include -I./include -I. -g -O2 -DHAVE_CONFIG_H -DMSCORE -c -o events.o events.c
gcc -Wall -I. -I. -I./lib -I./include -I./include -I. -g -O2 -DHAVE_CONFIG_H -DMSCORE -c -o flapping.o flapping.c
gcc -Wall -I. -I. -I./lib -I./include -I./include -I. -g -O2 -DHAVE_CONFIG_H -DMSCORE -c -o logging.o logging.c
gcc -Wall -I. -I. -I./lib -I./include -I./include -I. -g -O2 -DHAVE_CONFIG_H -DMSCORE -c -o macros-base.o ../common/macros.c
gcc -Wall -I. -I. -I./lib -I./include -I./include -I. -g -O2 -DHAVE_CONFIG_H -DMSCORE -c -o netutils.o netutils.c
gcc -Wall -I. -I. -I./lib -I./include -I./include -I. -g -O2 -DHAVE_CONFIG_H -DMSCORE -c -o notifications.o notifications.c
gcc -Wall -I. -I. -I./lib -I./include -I./include -I. -g -O2 -DHAVE_CONFIG_H -DMSCORE -c -o sehndlers.o sehndlers.c
gcc -Wall -I. -I. -I./lib -I./include -I./include -I. -g -O2 -DHAVE_CONFIG_H -DMSCORE -c -o utils.o utils.c
gcc -Wall -I. -I. -I./lib -I./include -I./include -I. -g -O2 -DHAVE_CONFIG_H -DMSCORE -c -o retention-base.o ../xdata/xrddefault.c
gcc -Wall -I. -I. -I./lib -I./include -I./include -I. -g -O2 -DHAVE_CONFIG_H -DMSCORE -c -o comments-base.o ../common/comments.c
gcc -Wall -I. -I. -I./lib -I./include -I./include -I. -g -O2 -DHAVE_CONFIG_H -DMSCORE -c -o xcomments-base.o ../xdata/xcddefault.c
gcc -Wall -I. -I. -I./lib -I./include -I./include -I. -g -O2 -DHAVE_CONFIG_H -DMSCORE -c -o objects-base.o ../common/objects.c
gcc -Wall -I. -I. -I./lib -I./include -I./include -I. -g -O2 -DHAVE_CONFIG_H -DMSCORE -c -o xobjects-base.o ../xdata/xodtemplate.c
gcc -Wall -I. -I. -I./lib -I./include -I./include -I. -g -O2 -DHAVE_CONFIG_H -DMSCORE -c -o statusdata-base.o ../common/statusdata.c
gcc -Wall -I. -I. -I./lib -I./include -I./include -I. -g -O2 -DHAVE_CONFIG_H -DMSCORE -c -o xstatusdata-base.o ../xdata/xsddefault.c
gcc -Wall -I. -I. -I./lib -I./include -I./include -I. -g -O2 -DHAVE_CONFIG_H -DMSCORE -c -o perfdata-base.o ../perfdata.c
gcc -Wall -I. -I. -I./lib -I./include -I./include -I. -g -O2 -DHAVE_CONFIG_H -DMSCORE -c -o xperfdata-base.o ../xdata/xpddefault.c
gcc -Wall -I. -I. -I./lib -I./include -I./include -I. -g -O2 -DHAVE_CONFIG_H -DMSCORE -c -o downtime-base.o ../common/downtime.c
make -C ./lib
make[2]: Entering directory '/home/ec2-user/downloads/nagios-4.5.5/lib'
gcc -Wall -g -O2 -I. -I./include -DHAVE_CONFIG_H -c squeeze.c -o squeeze.o
gcc -Wall -g -O2 -I. -I./include -DHAVE_CONFIG_H -c kvvec.c -o kvvec.o
gcc -Wall -g -O2 -I. -I./include -DHAVE_CONFIG_H -c iocache.c -o iocache.o
gcc -Wall -g -O2 -I. -I./include -DHAVE_CONFIG_H -c iobroker.c -o iobroker.o
gcc -Wall -g -O2 -I. -I./include -DHAVE_CONFIG_H -c bitmap.c -o bitmap.o
gcc -Wall -g -O2 -I. -I./include -DHAVE_CONFIG_H -c dhash.c -o dhash.o

```

```
ec2-user@ip-172-31-41-160:~/downloads/nagios-4.5.5
on doing this. Pay particular attention to the docs on
object configuration files, as they determine what/how
things get monitored!

make install-webconf
- This installs the Apache config file for the Nagios
  web interface

make install-exfoliation
- This installs the Exfoliation theme for the Nagios
  web interface

make install-classicui
- This installs the classic theme for the Nagios
  web interface

*** Support Notes *****
If you have questions about configuring or running Nagios,
please make sure that you:
- Look at the sample config files
- Read the documentation on the Nagios Library at:
  https://library.nagios.com

before you post a question to one of the mailing lists.
Also make sure to include pertinent information that could
help others help you. This might include:
- What version of Nagios you are using
- What version of the plugins you are using
- Relevant snippets from your config files
- Relevant error messages from the Nagios log file

For more information on obtaining support for Nagios, visit:
https://support.nagios.com

*****
Enjoy.
```

Run the following set of commands to ensure that
sudo make install

```
ec2-user@ip-172-31-41-160:~/downloads/nagios-4.5.5
[ec2-user@ip-172-31-41-160 nagios-4.5.5]$ sudo make install
cd ./base && make install
make[1]: Entering directory '/home/ec2-user/downloads/nagios-4.5.5/base'
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/bin
/usr/bin/install -c -s -m 774 -o nagios -g nagios nagios /usr/local/nagios/bin
/usr/bin/install -c -s -m 774 -o nagios -g nagios nagiosstats /usr/local/nagios/bin
make[1]: Leaving directory '/home/ec2-user/downloads/nagios-4.5.5/base'
cd ./cgi && make install
make[1]: Entering directory '/home/ec2-user/downloads/nagios-4.5.5/cgi'
make install-basic
make[2]: Entering directory '/home/ec2-user/downloads/nagios-4.5.5/cgi'
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/sbin
for file in *.cgi; do \
    /usr/bin/install -c -s -m 775 -o nagios -g nagios $file /usr/local/nagios/sbin; \
done
make[2]: Leaving directory '/home/ec2-user/downloads/nagios-4.5.5/cgi'
make[1]: Leaving directory '/home/ec2-user/downloads/nagios-4.5.5/cgi'
cd ./html && make install
make[1]: Entering directory '/home/ec2-user/downloads/nagios-4.5.5/html'
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/media
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/stylesheets
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/contexthelp
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/docs
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/docs/images
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/js
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/images
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/images/logos
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/includes
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/share/ssi
/usr/bin/install -c -m 664 -o nagios -g nagios ./robots.txt /usr/local/nagios/share
/usr/bin/install -c -m 664 -o nagios -g nagios ./jquery.html /usr/local/nagios/share
rm -f /usr/local/nagios/share/index.html
rm -f /usr/local/nagios/share/main.html
rm -f /usr/local/nagios/share/side.html
rm -f /usr/local/nagios/share/map.html
rm -f /usr/local/nagios/share/rss-*
rm -f /usr/local/nagios/share/graph-header.html
rm -f /usr/local/nagios/share/histogram.html
rm -f /usr/local/nagios/share/histogram-form.html
rm -f /usr/local/nagios/share/histogram-graph.html
rm -f /usr/local/nagios/share/histogram-links.html
rm -f /usr/local/nagios/share/infobox.html
rm -f /usr/local/nagios/share/map.php
```

sudo make install-init

```
ec2-user@ip-172-31-41-160:~/downloads/nagios-4.5.5
[ec2-user@ip-172-31-41-160 nagios-4.5.5]$ sudo make install-init
/usr/bin/install -c -m 755 -d -o root -g root /lib/systemd/system
/usr/bin/install -c -m 755 -o root -g root startup/default-service /lib/systemd/system/nagios.service
```

sudo make install-config

```
[ec2-user@ip-172-31-41-160 nagios-4.5.5]$ sudo make install-config
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/etc
/usr/bin/install -c -m 775 -o nagios -g nagios -d /usr/local/nagios/etc/objects
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/nagios.cfg /usr/local/nagios/etc/nagios.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/cgi.cfg /usr/local/nagios/etc/cgi.cfg
/usr/bin/install -c -b -m 660 -o nagios -g nagios sample-config/resource.cfg /usr/local/nagios/etc/resource.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/templates.cfg /usr/local/nagios/etc/objects/templates.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/commands.cfg /usr/local/nagios/etc/objects/commands.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/contacts.cfg /usr/local/nagios/etc/objects/contacts.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/timeperiods.cfg /usr/local/nagios/etc/objects/timeperiods.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/localhost.cfg /usr/local/nagios/etc/objects/localhost.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/windows.cfg /usr/local/nagios/etc/objects/windows.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/printer.cfg /usr/local/nagios/etc/objects/printer.cfg
/usr/bin/install -c -b -m 664 -o nagios -g nagios sample-config/template-object/switch.cfg /usr/local/nagios/etc/objects/switch.cfg

*** Config files installed ***

Remember, these are *SAMPLE* config files. You'll need to read
the documentation for more information on how to actually define
services, hosts, etc. to fit your particular needs.
```

sudo make install-webconf

```
[ec2-user@ip-172-31-41-160 nagios-4.5.5]$ sudo make install-webconf
/usr/bin/install -c -m 644 sample-config/httpd.conf /etc/httpd/conf.d/nagios.conf
if [ 0 -eq 1 ]; then \
    ln -s /etc/httpd/conf.d/nagios.conf /etc/apache2/sites-enabled/nagios.conf; \
fi

*** Nagios/Apache conf file installed ***

[ec2-user@ip-172-31-41-160 nagios-4.5.5]$
```

Next, we are supposed to create a nagiosadmin account for nagios login along with password. Specify the password twice.

sudo htpasswd -c /usr/local/nagios/etc/htpasswd.users nagiosadmin

```
[ec2-user@ip-172-31-41-160 nagios-4.5.5]$ sudo htpasswd -c /usr/local/nagios/etc/htpasswd.users nagiosadmin
New password:
Re-type new password:
Adding password for user nagiosadmin
[ec2-user@ip-172-31-41-160 nagios-4.5.5]$
```

Restart Apache

sudo service httpd restart

Go back to the downloads folder and unzip the plugins zip file.

cd ~/downloads

tar zxvf nagios-plugins-2.4.11.tar.gz

```
ec2-user@ip-172-31-41-160:~/downloads
[ec2-user@ip-172-31-41-160 nagios-4.5.5]$ sudo service httpd restart
Redirecting to /bin/systemctl restart httpd.service
[ec2-user@ip-172-31-41-160 nagios-4.5.5]$ cd ~/downloads
[ec2-user@ip-172-31-41-160 downloads]$ tar zxvf nagios-plugins-2.4.11.tar.gz
nagios-plugins-2.4.11/
nagios-plugins-2.4.11/build-aux/
nagios-plugins-2.4.11/build-aux/compile
nagios-plugins-2.4.11/build-aux/config.guess
nagios-plugins-2.4.11/build-aux/config.rpath
nagios-plugins-2.4.11/build-aux/config.sub
nagios-plugins-2.4.11/build-aux/install-sh
nagios-plugins-2.4.11/build-aux/ltmain.sh
nagios-plugins-2.4.11/build-aux/missing
nagios-plugins-2.4.11/build-aux/mkinstalldirs
nagios-plugins-2.4.11/build-aux/depcomp
nagios-plugins-2.4.11/build-aux/snippet/
nagios-plugins-2.4.11/build-aux/snippet/_Noreturn.h
nagios-plugins-2.4.11/build-aux/snippet/arg-nonnull.h
nagios-plugins-2.4.11/build-aux/snippet/c++defs.h
nagios-plugins-2.4.11/build-aux/snippet/warn-on-use.h
nagios-plugins-2.4.11/build-aux/test-driver
```

Compile and install plugins

cd nagios-plugins-2.4.11

./configure --with-nagios-user=nagios --with-nagios-group=nagios

Run the following command:

sudo chkconfig --add nagios

On running the above command

```
[ec2-user@ip-172-31-41-160 nagios-plugins-2.4.11]$ sudo chkconfig --add nagios
error reading information on service nagios: No such file or directory
```

If this is the output that one is getting, then it means that the init script is missing...

We can check this by running `ls /etc/init.d/`

```
[ec2-user@ip-172-31-92-249 nagios-plugins-2.4.9]$ ls /etc/init.d/
README  functions
[ec2-user@ip-172-31-92-249 nagios-plugins-2.4.9]$
```

With `ls` command, we must see a file named `nagios`, which i was not able to see

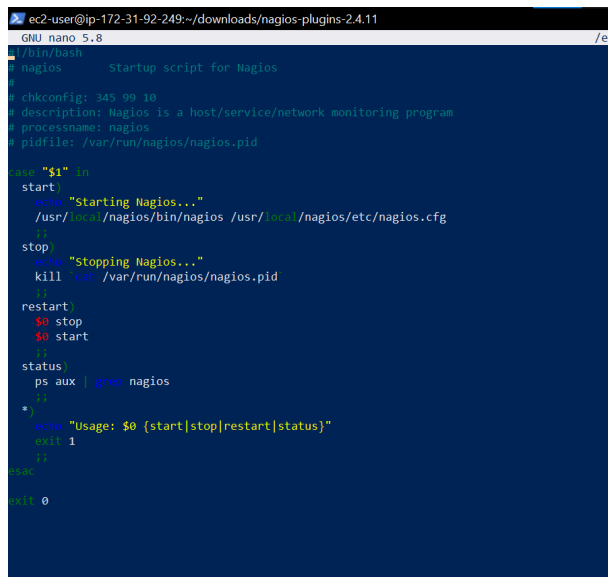
If the Init Script is Missing i.e If you don't see the `nagios` script in `/etc/init.d/`, you can create it manually. Here's how:

Run the following command:

sudo nano /etc/init.d/nagios

Within this file, paste the following script

```
#!/bin/bash
# nagios      Startup script for Nagios
#
# chkconfig: 345 99 10
# description: Nagios is a host/service/network monitoring program
# processname: nagios
# pidfile: /var/run/nagios/nagios.pid
case "$1" in
    start)
        echo "Starting Nagios..."
        /usr/local/nagios/bin/nagios /usr/local/nagios/etc/nagios.cfg
        ;;
    stop)
        echo "Stopping Nagios..."
        kill `cat /var/run/nagios/nagios.pid`
        ;;
    restart)
        $0 stop
        $0 start
        ;;
    status)
        ps aux | grep nagios
        ;;
    *)
        echo "Usage: $0 {start|stop|restart|status}"
        exit 1
        ;;
esac
exit 0
```

A screenshot of a terminal window with a dark blue background. The title bar shows 'ec2-user@ip-172-31-92-249:~/downloads/nagios-plugins-2.4.11'. The terminal content shows the same script as the previous block, with some lines highlighted in red (e.g., 'start', 'stop', 'restart', '\$0 stop', '\$0 start'). The cursor is at the end of the last line 'exit 0'.

```
ec2-user@ip-172-31-92-249:~/downloads/nagios-plugins-2.4.11
GNU nano 5.8 /etc
#!/bin/bash
# nagios      Startup script for Nagios
#
# chkconfig: 345 99 10
# description: Nagios is a host/service/network monitoring program
# processname: nagios
# pidfile: /var/run/nagios/nagios.pid
case "$1" in
    start)
        echo "Starting Nagios..."
        /usr/local/nagios/bin/nagios /usr/local/nagios/etc/nagios.cfg
        ;;
    stop)
        echo "Stopping Nagios..."
        kill `cat /var/run/nagios/nagios.pid`
        ;;
    restart)
        $0 stop
        $0 start
        ;;
    status)
        ps aux | grep nagios
        ;;
    *)
        echo "Usage: $0 {start|stop|restart|status}"
        exit 1
        ;;
esac
exit 0
```

Make the Script Executable: After saving the file, run the following command to make it executable:

sudo chmod +x /etc/init.d/nagios

Run **sudo chkconfig --add nagios** again

And then run **sudo chkconfig nagios on**

```
[ec2-user@ip-172-31-41-160 nagios-plugins-2.4.11]$ sudo nano /etc/init.d/nagios
[ec2-user@ip-172-31-41-160 nagios-plugins-2.4.11]$ sudo chmod +x /etc/init.d/nagios
[ec2-user@ip-172-31-41-160 nagios-plugins-2.4.11]$ sudo chkconfig --add nagios
[ec2-user@ip-172-31-41-160 nagios-plugins-2.4.11]$ sudo chkconfig nagios on
Note: Forwarding request to 'systemctl enable nagios.service'.
Synchronizing state of nagios.service with SysV service script with /usr/lib/systemd/systemd-sysv-install.
Executing: /usr/lib/systemd/systemd-sysv-install enable nagios
Created symlink /etc/systemd/system/multi-user.target.wants/nagios.service → /usr/lib/systemd/system/nagios.service.
[ec2-user@ip-172-31-41-160 nagios-plugins-2.4.11]$
```

sudo service nagios start

```
[ec2-user@ip-172-31-92-249 nagios-plugins-2.4.11]$ sudo service nagios start
Starting Nagios...

Nagios Core 4.5.5
Copyright (c) 2009-present Nagios Core Development Team and Community Contributors
Copyright (c) 1999-2009 Ethan Galstad
Last Modified: 2024-09-17
License: GPL

Website: https://www.nagios.org
Nagios 4.5.5 starting... (PID=72261)
Local time is Tue Oct 01 20:59:58 UTC 2024
wproc: Successfully registered manager as @wproc with query handler
wproc: Registry request: name=Core Worker 72265;pid=72265
wproc: Registry request: name=Core Worker 72264;pid=72264
wproc: Registry request: name=Core Worker 72263;pid=72263
wproc: Registry request: name=Core Worker 72262;pid=72262
Successfully launched command file worker with pid 72266
wproc: NOTIFY job 4 from worker Core Worker 72262 is a non-check helper but exited with return code 127
wproc: host=localhost; service=Swap Usage; contact=nagiosadmin
wproc: early_timeout=0; exited_ok=1; wait_status=32512; error_code=0;
wproc: stderr line 01: /bin/sh: line 1: /bin/mail: No such file or directory
wproc: stderr line 02: /usr/bin/printf: write error: Broken pipe
```

Get your public IPv4 address from your instance. We will require it for connecting to our nginx server

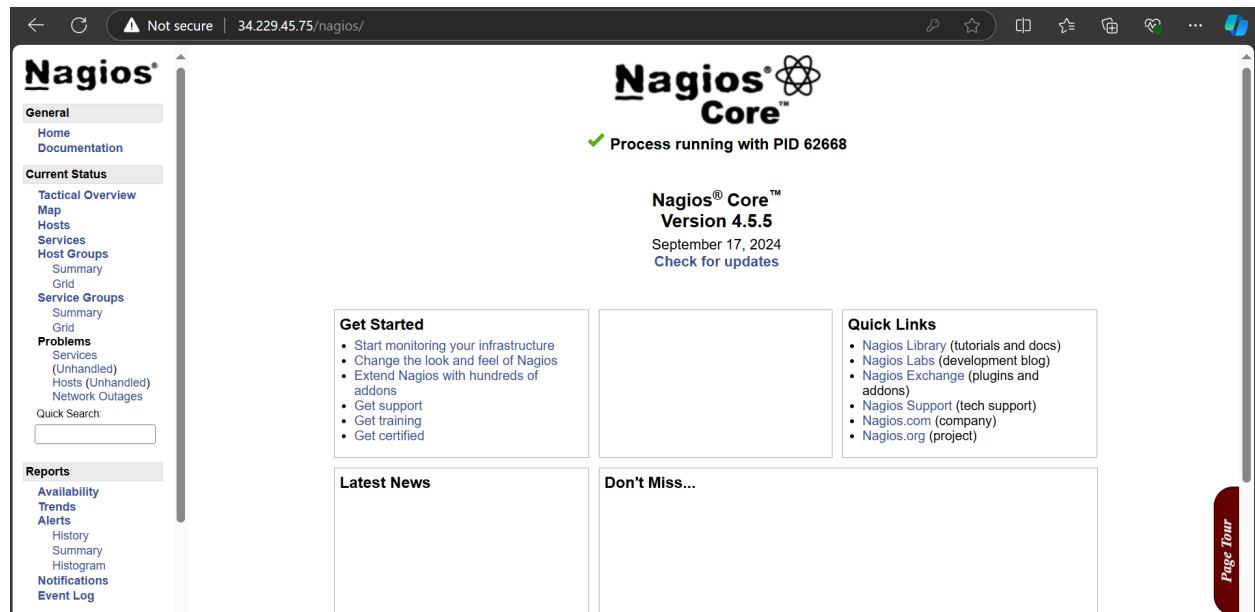
The screenshot shows the AWS Management Console interface. At the top, there's a summary bar for the instance 'nagios-host' (ID: i-0eda234d2e9ec8648), which is in a 'Running' state. Below this, the 'Details' tab is selected, showing various instance attributes. A tooltip is visible over the 'Public IPv4 address' field, indicating it has been copied. The instance is running on the 't2.micro' instance type in the 'us-east-1c' availability zone. The public IPv4 address is 44.203.161.215, and the public IPv4 DNS is ec2-44-203-161-215.compute-1.amazonaws.com.

Attribute	Value
Instance ID	i-0eda234d2e9ec8648 (nagios-host)
Instance state	Running
Instance type	t2.micro
Public IPv4 address	44.203.161.215
Public IPv4 DNS	ec2-44-203-161-215.compute-1.amazonaws.com
Private IPv4 addresses	172.31.92.249
Private IPv4 DNS name (IPv4 only)	ip-172-31-92-249.ec2.internal
Availability Zone	us-east-1c
Instance type	t2.micro
VPC ID	

Browse for this url: `http://<your_public_ip_address>/nagios`

The browser may ask you for your nagios credentials which set in the earlier steps

The username is nagiosadmin and enter the password that you set earlier



Conclusion:

In this experiment, we successfully installed and configured Nagios Core on an Amazon Linux EC2 instance, showcasing its role in continuous monitoring within a DevOps environment. We learned about user management and service configuration, emphasizing Nagios's ability to monitor systems and networks effectively. This experience laid the groundwork for enhancing infrastructure reliability and integrating advanced monitoring strategies in future projects.